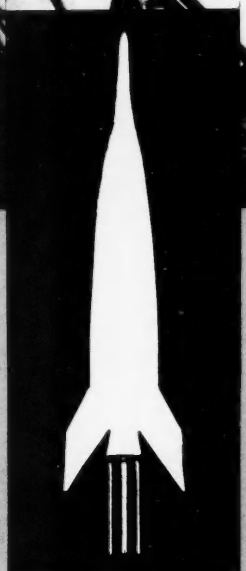

FEBRUARY 1959

data

GOVERNMENT RESEARCH AND DEVELOPMENT DATA

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AKRON 4, OHIO

IN THIS ISSUE:

New DATAGRAF Locator Charts . . . . . page 13

This is a special message for our Big Businessmen Readers and the Public Relations Directors of the Larger Corporations.

At the present time, DATA magazine readership falls into two main divisions: (1) *Government personnel* directly connected with Government Research & Development. (2) *Prime Government Contractors* – the larger businesses and their executives who deal directly with Government Agencies.

We would like to make DATA also appeal to a third group. We would like DATA to also be a good vehicle of contracting information for *Subcontractors* – the businessmen who never hope for a prime Government contract but do hope to serve the Prime Contractors.

Won't you help us in this?

Here's what we want to do. We want to tell your story to small businessmen. We want to have DATA feature different Prime Contractor corporations from time to time in subsequent issues. We want to tell the needs of large individual companies, how the small company should approach the featured large industrial in its desire for business with it, the personnel of this large industrial – who to see to talk business in various fields.

In featuring these companies – in the same manner that we feature military installations – we will be giving the large industrial free – that's right – free publicity, and we will open up a whole new group of DATA readers and DATA reader suppliers – the *Subcontractors.*

Here is what we will require: Company preparation of its own material by its own public relations staff within the framework of a given DATA layout and subject to DATA editing. Payment of halftone charges ($4.00) for each photograph used in the layout.

If you are interested in having DATA feature your company and tell your story and what you want to buy from small business, please contact me.

Sincerely,

Murray Queen Smith
Editor, DATA

keep up to date with

data magazine

Volume 4 Number 2

* Title registered United States Patent Office

Published Monthly by
Queensmith Associates, Inc.

Editor & Publisher: MURRAY QUEEN SMITH
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Magazine Layout: BARBARA DODD

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OUR COVER

The world's largest fiberglass radome, measuring 68 feet in diameter and standing more than seven stories high, was designed and built under Air Force contract by Goodyear Aircraft Corp. for the Missile Detection Systems Section of General Electric Company's Heavy Military Electronics Dept., Syracuse, N. Y. The huge laminated plastic structure utilizes hundreds of panels bolted together in a few basic panel groups.

WHO'S WHO IN NASA

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How KENNAMETAL* Sealing Rings...

Help to Withstand High Temperatures . . . A jet engine shaft seal of Kentanium,* a titanium carbide, operating without lubrication at 15,000 surface feet per minute at 1000°F and 0.6 pounds pressure per lineal inch of circumference outperformed every other material tried. Kentanium is stress-free, dimensionally stable, maintains great strength and provides exceptional resistance to abrasion. It is providing all of these advantages on many applications . . . at temperatures up to 2000°F and as high as 5000°F for momentary service.

Help Solvent Separators to Resist Abrasion . . . On this job, Kennametal rings of Grade K96 were installed, replacing conventional seals which had at no time given more than two months' service and had sometimes failed in only 30 hours. Kennametal rings were inspected after six months in service, showed no perceptible wear and were returned to service. The customer predicts an ultimate service advantage of 50 to 1.

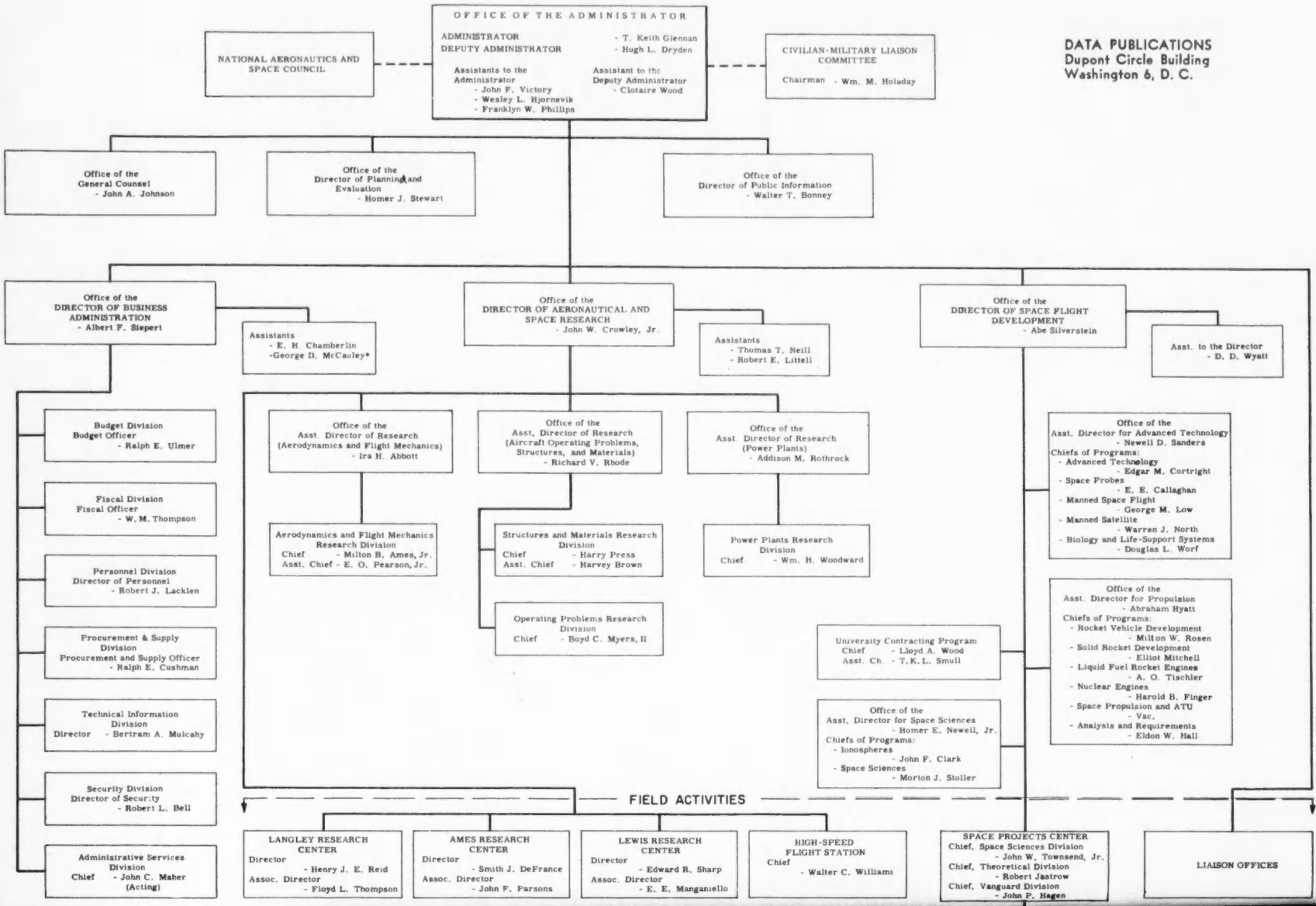
Help to Power Rockets . . . Here the sealing rings are used to handle red fuming nitric acid. After extensive testing of materials, rings made of Kennametal K501, a platinum-base composition, were chosen. The manufacturer reports: "Kennametal ring sealing results have been far superior to any other material with no indication of seal face wear." This was after the best life of the rings previously used had been exceeded.

For details, write for 24-page Booklet B-111, "Characteristics of Kennametal" . . . and 12-page Booklet B-444 which describes "Kentanium." KENNAMETAL INC., Dept. DT, Latrobe, Pa.

*Trademark 3172

INDUSTRY AND KENNAMETAL ...Partners in Progress

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION ORGANIZATION CHART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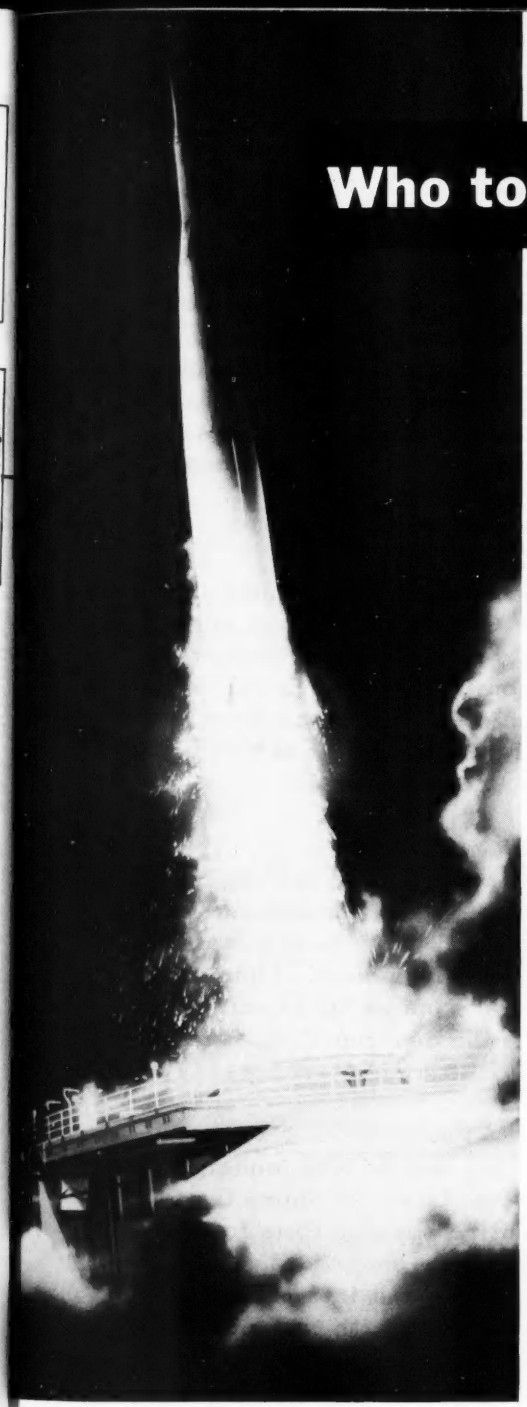

One of a long series of Air Force recommendations for a lunar probe vehicle of maximum reliability was the mating of the Thor missile with the upper two stages of the X-17. Shown here is a launching of the hybrid vehicle, described as having the greatest "reliability factor" of existing lunar shot proposals.

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Langley Research Center
Langley Field, Virginia

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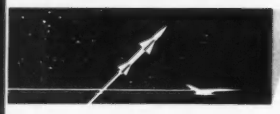

AIR SPACE

AF TRACKED SOMETHING, NOT A SATELLITE

One of best-kept secrets is excitement that swept close ranks at AF Missile Test Center in November '58. Radar units at Cape Canaveral tracked object in space. Tracking was simultaneous from several radars. Astonished US technicians established beyond any doubt that unidentified object moving well in excess of orbital velocity was in space. Dept. of Defense refuses any comment, will not admit that tracking ever took place. No US vehicle was involved. Simultaneous with radar tracking was pickup of unidentified radio signals.

ARPA AND NASA BATTLE BRINGS IRE TO AIR FORCE

A formerly quiet battle between ARPA and NASA for supremacy in control of space projects is now not-so-quiet. Crazyquilt control system of conflict between Advanced Research Proj Agency and Natl Aero and Space Admin has prevented any decision from being made in AF's bid to put 2000-lb payload into orbit about moon or sun or place instrument package on moon in soft landing. AF would use ATLAS as the bird. We bet on NASA to win out over ARPA in final say-so.

TITAN WILL BECOME RESEARCH VEHICLE

TITAN, currently this country's biggest ICBM, is slated for cut in funds in favor of solid-fueled MINUTEMAN. But TITAN will still be around for quite some time as research vehicle. Liquid propellant missiles are currently more reliable and better for research work. Hence, TITAN — and ATLAS, too — will see more service as US scientific birds. Where ATLAS leaves off, TITAN can be developed as tremendous booster vehicle, could send 1000 payload to orbit of Jupiter.

ATLAS FIRING 4-C IN LATE JAN 59 HAD LONGEST BURNING TIME

No comment from Air Force re: ATLAS firing 4-C in late January. Purpose undisclosed. Atlas propulsion system fired for more than 6 minutes 30 seconds, which is longer than entire burning time for ATLAS 10-B which went into orbit. Rumors of special re-entry test seem most reliable, for ATLAS 4-C could easily have gone into orbit. It was programmed, however, to loft high and plunge back with tremendous speed down the Atlantic Missile Range.

PROJECT DISCOVERER BOGGED DOWN WITH DIFFICULTIES

Numerous technical difficulties have forced constant cancellations of DISCOVERER satellite firings on West Coast pads at Vandenberg AFB. One wit at Canaveral has described DISCOVERER vehicle, scrubbed time after time, as ". . . the cleanest satellite ever to go into orbit."

WHAT HAPPENED TO THOR-ABLE PROGRAM?

AF keeping mum on status of its THOR-ABLE PHASE II program, will not comment on specific purpose or equip of THOR #128 fired 22 Jan '59.

ADMIRAL BUILDS NEW AIR TRAFFIC CONTROL SYSTEM

Admiral will dvlp and produce bright display systems, a new factor in refined air traffic control, in a $5,729,116 contract with CAA. System will record radar mapping info and display it on TV monitors in control rooms, providing immediate, minute-by-minute info to 10 air control observers of all planes approaching, in or leaving area. ///Adm 0159/

ELECTRONIC TRACER FOLLOWS SIMPLE PENCIL SKETCHES

Linde's Photocell Tracer makes possible use of pencil or ink sketches to guide oxygen shape-cutting machines. With automatic kerg compensator, tracer eliminates expensive metal or plastic templets, negatives, silhouettes and allowance for kerf width. ///Linde 0159/

AF GIVES $22 MILLION FOR ATLAS COMPUTER

2 AF contracts, totalling $22,448,568, were awarded to Burroughs Corp for new ground guidance Atlas computer. ///Burroughs 4132/

WORLD'S LARGEST ANTENNA PROPOSED

GE and Cornell Univ have proposed to AF and ARPA an antenna, 1,000 ft in diameter, for electron density measurement and interplanetary relay.

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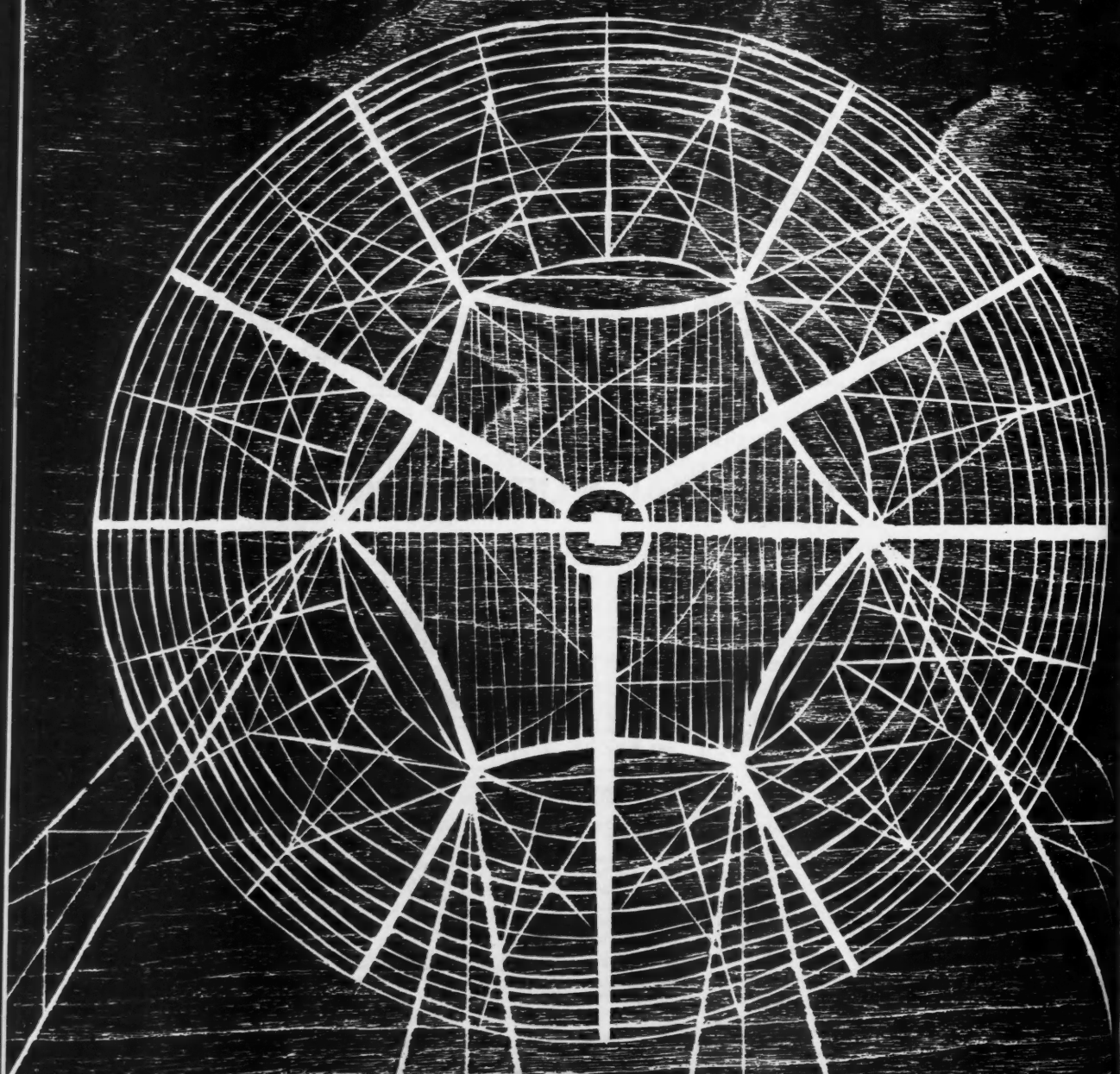

THE MANAGEMENT MAGAZINE OF TECHNICAL PROGR

ur responsibility!

THE GIANT DISH ANTENNA shown here as a dramatic wood engraving could do more to strengthen our national defense than all of the billions spent for armament.

This antenna, and others like it, soon will broadcast television and telephone signals to a satellite or a fleeting meteor, and from there to the other side of the earth. The result: world-wide communications. A housewife in Washington will be able to dial a *zhenshcheenah* in Moscow. A riot in Indochina could be televised "live" to San Francisco.

How this could be done, the technical approaches, the problems that remain to be solved—explained in non-technical language — comprise the lead article, "Global Communications" in the Spring issue of the new quality magazine, *Industrial Research*.

Today more than ever, governmental executives must keep informed of new scientific and technological developments that affect our nation's destiny. Filling this need to know is the purpose of *Industrial Research*.

Penetrating and sometimes controversial articles written by the nation's leading authorities fill the sparkling pages of I•R. Here are some of the other early-issue articles:

- *Why Isn't the Post Office Automated?*
- *Semiconductors: a Dynamic New Industry*
- 1959 *Forecast:* $12 *Billion for Research*
- *The World's Hottest Alloys*
- *The Flying Machine—a New Era*
  Part 1, Aircraft; Part 2, Spacecraft
- *Why Isn't Science Represented in Government?*
- *And many other articles of vital interest to industrial and governmental executives in the fields listed to the right.*

FREE—*a copy of the first edition with more than* 50,000 *words and over a hundred colorful illustrations—if you send in your payment with the order to the right, saving us billing. This will be a collector's item soon. Your regular subscription under this offer will begin with the Spring issue, the cover of which is shown here. Subscription price includes the bound-in* RESEARCH TRENDLETTER, *a* 16*-page summary of vital, trendsetting developments in all fields of research.*

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LOGISTICS : MATERIALS

NEW THERMO-PLASTIC FINDS MULTI-APPLICATION

DuPont's 'Delrin' is projected for use in automobiles, appliances, packaging, mach mfg; considered for use in bushings, bearings, suspension systems, gears, pumps, carburetors. Used for sleeve bearings and survived in 70-hr test at 250 deg F. Forms tough units; is stiff; dimensionally stable at temp extremes and under load; easily fabricated and serviced; acts as elec insulator; resists hydrocarbons. ///DuPont 1258/

QM TESTS QUICK-OPENING PARACHUTE

Opening in 8/10 sec, the XMP-2 chute will be used by low-flying Army platform; tested by Quartermaster R&D. ///Army 0159/

ENCAPSULATED LIQUID FUEL STUDY INITIATED

Natl Cash Register, under 2 military contracts, is using Polymer-type materials to enclose liquid fuel in microscopic capsules to impart stability, longevity and handling advantages of solid fuel to liquid fuel. Fuel volumn reaches 95% of total storage vol in rockets. Study concentrates on liquid fuels with hi specific impulses. ///DOD 0159/

ALUMINUM RAFT CARRIES 12 TONS

Army Engineers have dvlpd aluminum raft that can be manually erected in 15 min. Designed to ferry combat vehicles over water hazards, the raft carries 12 tons in swift currents. ///Pent 0259/

BUAER OPENS UNDUSTRY STIMULATION PROGRAM

Establishment of the BUAER-Industry Reliability Board, composed of 15 men from Navy and industry, will implement new plan to improve contractor reliability, safety and maintainability. ///Navy 0159/

AEC RADIOACTIVE-WASTE DISPOSAL LICENSE

The Atomic Energy Commission issued license to Industrial Waste Disposal Corp authorizing disposal of radioactive wastes in Gulf of Mexico. IWD will collect pre-packaged waste material from other Commission licensees for further packaging in reinforced concrete and sea disposal.

CORNELL MAKES AVAIL HYPERSONIC TUNNEL

The Cornell Aero Lab's wind tunnel, with testing capabilities for hypersonic speeds, is being made avail to outside companies for testing a/c and missile designs at 20-times speed of sound. ///Cornell 0159/

JOINT STORAGE AGREEMENT

For 1st time govt storage space is avail to all federal agencies. Agency supplying service will furnish personnel and supplies; requesting agency will reimburse supplying agency. ///DOD 0159/

MARTIN CAIDIN TO BE NEW EDITOR OF DATA

Martin Caidin, shown here getting checked out in Convair TF-102, becomes new editor of DATA next month. Aviation writer, jet pilot, and missile authority, *Caidin* will present his own views in feature stories.

MARTIN CAIDIN, feature writer of air and space articles in leading magazines and author of 13 different books on aviation and space flight including *Count Down for Tomorrow*, *Air Force*, and *Vanguard* will become the new editor of DATA effective with the March issue.

In bringing *Martin Caidin* into DATA, DATA will change its style of presentation. In the editorials of *Marty Caidin*, DATA will take sides and be opinionated whereas in the past DATA has always presented only the facts without coming to opinionated conclusions. The visits to different R & D installations and the categorical section where squibs telling of new hardware in the Government's bin will, of course, remain straight, factual, and unbiased. *But look out for those Caidin editorials!*

The next issue of DATA will give *Caidin* free rein. *Caidin*, who recently piloted a Piper Tri-Pacer down to the tight-fisted security base of Cape Canaveral, breaks loose next month with a dissertation about a little-known Air Force project to make IRBM into an ICBM.

We invite you all to be on tap next month when *Marty Caidin* becomes the new editor of DATA with a bang!

Don't miss "THOR-ABLE – PHASE II" by Martin Caidin in the March issue of DATA.

STATEMENT REQUIRED BY THE ACT OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946 (TITLE 39, UNITED STATES CODE, SECTION 233) SHOWING THE OWNERSHIP, MANAGEMENT, AND CIRCULATION OF DATA MAGAZINE, published monthly at Washington, D.C. for 28 February, 1959.

1. Editor: Martin Caidin

2. Owner, Publisher, Business Manager, Managing Editor: Murray Queen Smith.

3. The known bondholders, mortgagees, and other security holders owning or holding one percent or more of total amount of bonds, mortgages or other securities are: None.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of bona fide owner.

5. The average number of copies of each issue of the publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was 2,947.

Murray Queen Smith

MURRAY QUEEN SMITH
Publisher and Managing Editor
(Signature)

Sworn to and subscribed before me this 15th day of February, 1959.

Benjamin E. Becker

BENJAMIN E. BECKER
(Signature)
(My commission expires March 15, 1961)

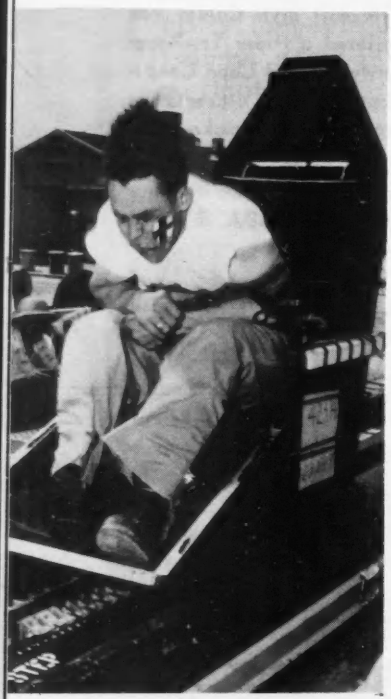
MEDICAL

A-SUB PRESENTS TOOTH-DECAY PROBLEM

Animal tests are being run to learn cause of 100% increase in tooth decay of atomic submariners. Possible causes are excessive carbon dioxide, increased noise levels and loss of light and dark periods. Radiation eliminated as possible cause.

FATALITY OF COLD-WATER IMMERSION

The belief that rapid rewarming of chilled surviving pilots is dangerous has been disproved. Hot water (apprx 120 deg F) should be used on survivors exposed to very cold water. Death from temps of 50 deg and below are reported to occur within a few minutes after exposure—40 hrs in temps up to 70 deg F. Long exposure in moderate temps should be treated by gradual rewarming. ///Med Ns Ltr/



"I experienced no pain except directly over the hip bone" wrote S/Sgt R.A. KNOW after this Bopper sled test. The 20-ft sled is part of an ARDC biodynamics project to measure human endurance and reactions to hi-G forces in abrupt space deceleration.

ULCER-HEALING TRANQUILIZER LOOKS PROMISING

A new antispasm, anti-anxiety tranquilizer which abolishes "fears and neurotic responses" cured 34 of 35 patients tested, without diet.

INTENSE LIGHT REPLACES SURGERY

Hotter than the sun, a beam of intense light is replacing surgery in treating retinal detachments and eye tumors. ///NsWk 12-58/

POTENT NEW ANTIBIOTIC FOUND

Virac, a chem combining iodine and a detergent, is 9 times more effective than antibiotics in killing germs.

RESEARCH ON COMMON COLDS

Icebreaker USS Staten Island will store in deep-freezers samples of cold virus from its crew and from men in the Antartic. By tracing the different viruses, scientists hope for better understanding of the common cold. ///DOD 1-59/

NEW PILL AIDS HEARING

Arlidin, a simple pill, shows promise of curing hearing complaints caused by blood shortages in the inner eardrum, a cause of 1/4th of all hearing problems, says Dr W. Rubin. The pill opens tiny, constricted blood vessels in the inner ear.

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C-20 ARMY ADJUTANT GENERAL $2
Complete guide to offices of the chiefs, executives and administrative officers of the US Army Adjutant General. Chain-of-command block diagram with names, room and phone numbers. Pentagon.

C-21 ARMY ORDNANCE MISSILE COMMAND, REDSTONE ARSENAL $2
Staff directory in block diagram format. Key personnel names, rooms, phones.

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Directory of key personnel, rooms and phones in CNO. Pentagon.

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Staff directory of ARDC Headquarters plus ARDC Centers. Key personnel with titles, rooms, phone extensions given for Andrews AFB (ARDC HQ) and subordinate activities. Block diagram format.

C-34 ARMY TRANSPORTATION SUPPLY & MAINTENANCE COMMAND $2
Staff directory in chain-of-command block diagram for US Army Transportation Corps Supply & Maintenance Command at St. Louis. Names, rooms and phones for all key people.

C-35 TRANSPORTATION CORPS FIELD ACTIVITIES (map) $2
17 x 22 inch map with large ledgend blocks and arrows pointing to locations of all US Army Transportation Corps activities in Continental United States. Key gives operational jurisdiction of each activity.

C-36 ARMY TRANSPORTATION TRAINING COMMAND, FORT EUSTIS $2
Staff directory in chain-of-command block diagram for key people in Army Transportation Training Command, Fort Eustis, Virginia.

C-37 HQ, OFFICE OF CHIEF CHEMICAL OFFICER, US ARMY $2
Staff directory of Army Chemical Officer. Names, titles, room and phone numbers in chain-of-command block diagram. Washington area, T-7 Bldg.

REVISED THIS MONTH

C-5 WHO'S WHO in the OFFICE OF NAVAL RESEARCH $2
Most recent listing of key personnel with rooms and phones on one side of chart. Block diagram of ONR offices on flip side.

C-12 FEDERAL AVIATION AGENCY (FAA) $2
Although still in state of change, DATAGRAF presents most complete staff directory available. Names-rooms-phones. (Formerly CAA)

CURRENT CHARTS

C-1 WHO'S WHO in SECDEF OFFICE $2
The Office of the Secretary of Defense, Pentagon. Complete block diagram shows functions, relative authority, lines of influence, names, room and phone numbers.

C-2 WHO'S WHO in the NAVY DEPARTMENT $2
Over-all Navy Department guide for Washington area. Gives diagram breakdown under Secretary of Navy for key personnel and offices in CNO, BuAer, BuMed, BuOrd, etc. Room and phone numbers, names kept up-to-date.

C-3 WHO'S WHO IN DEPARTMENT OF ARMY $2
Headquarters offices of the Army in the Pentagon and elsewhere set forth in complete detail including names of hundreds of key officials, room numbers, phone extensions.

C-4 WHO'S WHO in the AIR FORCE $2
Complete chart of the Air Staff divisions. Line and staff officials shown down to the fifth echelon. Rooms and phones.

C-6 AIR FORCE INSTALLATIONS MAP $5
Guide to every major A.F. installation in Continental U. S. Printed on sturdy 22 & 34 inch stock suitable for wall mount.

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New version of our popular AFOSR rerference. AFOSR has moved to new quarters. We have names of all new personnel, new room numbers, phone extensions. Flip side has block diagram.

C-8 WHO'S WHO in ARPA $2
Guide to the Advanced Research Projects Agency of the Department of Defense.

C-9 U. S. ARMY SIGNAL CORPS—WASHINGTON
Complete block diagram is excellent locator of all key U. S. Army Signal Corps personnel in Washington area. Names and titles along with room numbers, phone extensions and divisional responsibilities.

C-10 U. S. ARMY SIGNAL CORPS—
FORT MONMOUTH R&D LABS $2
This combination chart is really two complete charts in one. Administrative breakdown, personnel, rooms and phones on one side. Research & Development key personnel, project officers, and other Ft. Monmouth R&D Lab personnel with rooms and phones on other side.

C-11 U. S. ARMY SIGNAL SUPPLY AGENCY—
PHILADELPHIA $2
Very useful chart of all key people, room numbers, phone extensions, chain of command in USASSA. If you want to sell anything to the Army Signal Corps, this is the key chart.

C-13 WHO'S WHO in JOINT CHIEFS OF STAFF $2
Joint Chiefs of Staff listing of all 305 key officers, titles, room numbers, extensions on one side. Flip side has chain-of-command block diagram with names filled in.

C-14 WHO'S WHO in BUAER $2
BUREAU OF AERONAUTICS chart gives key personnel, room and phone numbers in block diagram for this Navy bureau.

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BUREAU OF ORDNANCE chart gives key personnel, room and phone numbers in block diagram for this Navy bureau.

C-17 ARMY CHIEF OF ORDNANCE $2
ARMY ORDNANCE chart gives key personnel, room and phones in block diagram.

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Key personnel, rooms and phones in block diagram format.

C-25 WHO'S WHO in NAVY INFORMATION $2
Key personnel, rooms and phones in block diagram format with added location list.

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ERDL, the Army's engineering research and development lab. Key personnel, room and phones in block diagram format.

C-30 USAF AIR MATERIEL COMMAND $2
The central buying activity of the Air Force. Key personnel, rooms and phones in block diagram format.

C-31 NASA NATIONAL AERONAUTICS AND
SPACE ADMINISTRATION $2
Key personnel, rooms and phones in block diagram format.

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R-1 AIR FORCE BASES (Revised August 1958) $2
New bases and name changes are reflected in latest DATA compilation of USAF bases in both continental U. S. and overseas. Perfect supplement for AF map.

R-2 U. S. MISSILES CONTRACTING GUIDE $2
July 1958 issue of DATA. Full information concerning military contracting officers, prime contractors and principal sub-contractors. Also includes special fact sheet on Advanced Research Projects Agency.

R-3 NAVY BASES $2
Compilation of 246 shore activities of the U. S. Navy including air stations, communications stations, shipyards, experiment and test stations, laboratories, ordnance plants.

R-4 ARMY BASES $2
Alphabetical listing and addresses of all Class I, II, III bases of Army within continental U. S. Includes arsenals, experiment stations, supply centers, etc.

SPECIAL ITEMS

JS-3 HANDBOOK OF TAPES USED BY BUAER $4.
39-page booklet gives info on 17 pressure tapes, 3 solvent activated tapes, used by Navy's Bureau of Aeronautics.

JS-1 COATING MATERIALS FOR NAVAL AIRCRAFT $4.
Large chart, 48 x 19 inches, gives info on laquers, enamels, varnishes, resins, anti-foul paints rubber paints, ID paints, non-slip dressings, metallic pigments and rubbing compounds. Applications, procedures, thinners and descriptive remarks are listed with each paint. In use by Navy's Bureau of Aeronautics.

JS-2 CORROSION PREVENTATIVES USED ON NAVAL AIRCRAFT $4
Large chart, 28 x 24 inches, lists 18 types of corrosion preventatives used by Navy and gives info under headings tagged specifications, uses, description, composition, method of application, removal, etc. Navy stock numbers. Chart is in current Navy use.

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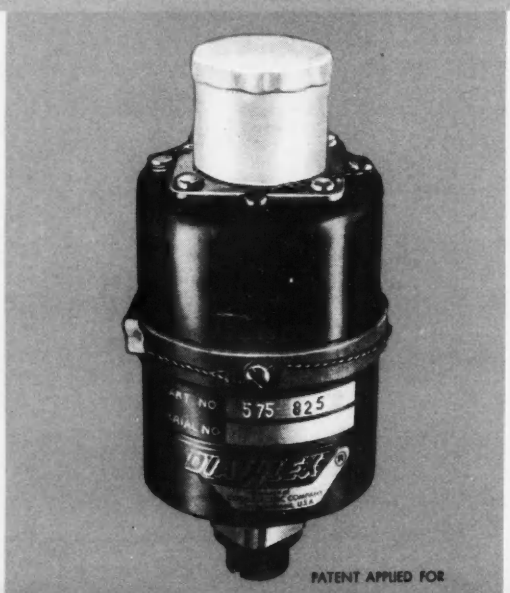

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